Indiana Department of Environmental Management
2009 Annual Compliance Report for Indiana Public Water Supply Systems

IDEM Drinking Water Branch **September 2010**

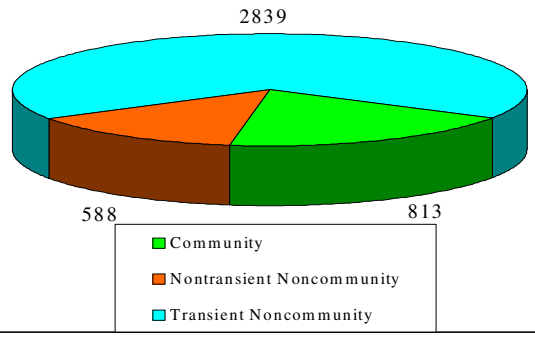
Introduction

The 1996 Amendments to the Safe Drinking Water Act require each state to prepare an annual report of violations of the national primary drinking water regulations for public water supplies. The annual reports are intended to provide a summary of violations of maximum contaminant levels (MCL's), treatment techniques, variances and exemptions[1], and monitoring and reporting violations (M&R). This report includes information for the time period January 1, 2009 through December 31, 2009.

Public Water Supply Information

There are approximately 4,240 active public water supplies in Indiana. Graph 1 shows the distribution of public water systems by the system type. Drinking water in Indiana comes from ground water sources via wells or surface water systems such as lakes and rivers. Some public water systems purchase water from other public water supplies and distribute the water to their customers. Ninety-seven percent (97%) of all public water systems are served by ground water systems. However, only fifty-six percent (56%) of the total population is served by systems utilizing ground water.

Graph 1. Number and Type of Public Water Systems in Indiana



[1] IDEM did not issue any variances or exemptions in 2009, therefore there are no violations for variances and exemptions to address in this summary report.

Drinking Water Monitoring Requirements

The Safe Drinking Water Act and the Indiana Public Water Supply Supervision Program mandate the monitoring and reporting of various bacteriological and chemical contaminants that may be found in drinking water. The contaminants are categorized as total coliform, nitrate (NO_3), inorganic chemicals (IOCs), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), radionuclides (Rads), lead and copper (Pb/Cu), and Stage 1 and Stage 2 disinfectants/disinfection byproducts (D/DBPs) Rules. The levels of these contaminants in drinking water are compared to maximum contaminant levels (MCLs) which are set by the Environmental Protection Agency (EPA) and the State, to ensure that water is safe for human consumption. In addition, compliance results may trigger additional actions, such as source water monitoring under the Ground Water Rule (GWR) or public education for lead. See Table 2 on the back page for a list of MCLs and action levels for all of the regulated contaminants.

Surface water systems are also required to comply with the provisions of the Interim Enhanced Surface Water Treatment Rule (IESWTR) and the Long Term1 Enhanced Surface Water Treatment Rule (LT1ESWTR). These rules establish regulations pertaining to treatment techniques that require systems to properly treat their water. If a PWS fails to properly treat its water or cannot control the levels of such contaminants as turbidity, bacteria, viruses, or parasitic microorganisms the system has violated the provisions of the Safe Drinking Water Act and is assigned a Treatment technique (TT) violation. Surface water systems were also required to sample for *Cryptosporidium* and/or *E. coli* under the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) to determine if additional treatment is required to remove *Cryptosporidium*.

If a system has an MCL or TT violation, that system becomes a priority for follow-up by the Drinking Water Branch to ensure the violation is corrected.

Violation Summary

Table 1 provides a summary of the number of MCL, M&R, and TT violations for all of the regulated drinking water contaminants for the 2009 calendar year (January 1, 2009 - December 31, 2009). The table also provides a summary of the number of systems in violation for each contaminant group.

Table 1. 2009 Violations Summary for Indiana Public Water Supplies									
		MCL		Treatment Technique		Monitoring & Reporting		Consumer Confidence	
		Violations	Systems In Violation	Violations	Systems in Violation	Violations	Systems In Violation	Violations	Systems in violation
CCR	CWS							48	37
Pb/Cu	CWS			0	0	73	49	**PN NPDWR Violations**	
	NTNC			0	0	43	43		
SWTR	CWS			2	1	0	0	0	0
	NTNC			3	2	1	1		
	TNC			0	0	0	0		
VOC	CWS	0	0			315	14		
	NTNC	0	0			420	18		
IOC	CWS	7	4			199	26		
	NTNC	31	16			193	36		
	TNC	30	24			340	336		
SOC	CWS	0	0			149	12		
	NTNC	1	1			566	26		
TCR	CWS	42	31			109	59		
	NTNC	52	44			73	65		
	TNC	271	244			1338	951		
Rads	CWS	0	0			0	0		
DBP	CWS	28	9	4	1	48	26		
	NTNC	3	1	0	0	7	4		
	TNC	0	0	0	0	0	0		
Totals	CWS	77	43	6	2	893	155		
	NTNC	87	58	3	2	1303	138		
	TNC	301	267	0	0	1678	1054		

Total Number of Systems in Violation*		
	CWS	252
	NTNC	187
	TNC	1208
	Total	1647

Total Number Of Violations		
	CWS	1024
	NTNC	1393
	TNC	1979
	Total	4396

LEGEND

MCL=Maximum Contaminant Level Violation	**SWTR**=Surface Water Treatment Rule	**VOC**=Volatile Organic Compounds (21 Chemicals)	**NO3**=Nitrate
Pb/Cu=Lead and Copper	**SOC**=Synthetic Organic Compounds (27-30 Chemicals)	**TNC**=Transient Noncommunity	**Rads**=Radionuclides
IOC=Inorganic Chemicals (10-12 Chemicals)	**TTHM**=Total Trihalomethanes	**CWS**=Community Water System	
TCR=Total Coliform Rule	**NTNC**=Nontransient Noncommunity Water System	**CCR**=Consumer Confidence Report	

* This number represents the total number of systems in violations for 2009. However, this number includes some systems with multiple violations across contaminant groups.

An evaluation of the 2009 Annual Compliance Report (ACR) shows the compliance rates at about sixty-eight percent (68%) for monitoring and reporting (M/R) violations, ninety-one percent (91%) for MCLs, and ninety-nine and nine-tenths percent (99.9%) for TT violations. The majority of the violations are related to failing to sample. Approximately thirty-two percent (32%) of the total number of active water systems have sampling (M/R) violations for at least one contaminant, but the majority of the systems (approximately 78%) are transient public water systems.

A key indication of the quality of the drinking water is the Community Water Systems' (CWS) population meeting current health-based standards. IDEM and EPA Region 5 agreed on a strategic plan with shared goals including tracking the percentage of population served by CWS that meets the current health-based standards. During 2009, the percentage was measured quarterly and the average for the four (4) quarterly results was ninety-eight and one half percent (98.5%) of the population served by CWS in Indiana meet all health standards. The 4th Quarter 2009 result was ninety-nine and three tenths percent (99.3%).

Consumer Confidence Reports

All community public water systems are required to develop and distribute to their customers a brief annual water quality report, called a consumer confidence report (CCR). The community water system is required to deliver a copy of the CCR to its consumers by July 1st. The purpose of the report is to inform and educate customers on the status and quality of their public water supply. The report contains information on the sources of drinking water, the levels of any detected contaminants, and educational information regarding drinking water.

Compliance Assistance Efforts

The Drinking Water Branch currently assists public water supply owners and operators to promote compliance with the drinking water regulations. Assistance is provided through several activities, namely: site visits, correspondence, telephone contact (including the use of interactive voice response (IVR) and regular phone calls), e-mails, educational presentations and materials, and the small system laboratory assistance program (SSLAP). For the very small nonprofit systems serving a population of one hundred (100) or less, IDEM provides free sampling under the SSLAP. Another way to reduce sampling violations is to remind all public water systems of the required monthly, quarterly, semi-annual, or annual sampling by utilizing the IVR system, which leaves automated messages(s) to systems indicating when the sampling requirements are due. Further, IDEM also uses e-mails (if we have e-mails on file) as a way to notify systems of when sampling is due.

The following is a summary of the number of site visits and assistance that were conducted in 2009 by the Drinking Water Branch staff:

Sanitary Surveys	**1207**
Well Site Surveys	**97**
Technical Assistance Visits	**956**
MCL Follow-Up Visits	**205**
IVR Calls & E-mails	**35104**

The Drinking Water Branch continues to provide assistance to all public water systems as a means to ensure drinking water is protective of human health.

For More Information

If you have any questions concerning this report or would like the lists of public water supplies that have had violations in 2009, please contact the Drinking Water Branch at (317) 234-7430. Additional copies of this report are available on the Indiana Department of Environmental Management, Office of Water Management, Drinking Water Branch web-site at http://www.in.gov/idem/5093.htm or by contacting the Drinking Water Branch at (317) 234-7435.

Additional information regarding the quality of your drinking water may be obtained by contacting your local public water supplier. Please contact your local public water supply for a copy of the latest consumer confidence report (CCR) for your public water system.

For more information regarding all aspects of the environment in Indiana, visit IDEM's website at: http://www.in.gov/idem/. Also, for general information regarding drinking water you may contact the EPA Safe Drinking Water Hotline by calling (800) 426-4791.

TABLE 2
REGULATED CHEMICAL DRINKING WATER CONTAMINANTS
MAXIMUM CONTAMINANT LEVELS

Contaminant	MCL	Contaminant	MCL	Contaminant	MCL
Inorganic Chemicals (IOCs)	**mg/l**	**Volatile Organic Compounds (VOCs)**	**ug/l**	**Synthetic Organic Compounds (SOCs)**	**ug/l**
Antimony	0.006	1,1-Dichloroethylene	7	2,4-D	70
Arsenic	0.01	1,1,1-Trichloroethane	200	2,4,5-TP (Silvex)	50
Barium	2	1,1,2-Trichloroethane	5	Alachlor	2
Beryllium	0.004	1,2-Dichloroethane	5	Atrazine	3
Cadmium	0.005	1,2-Dichloropropane	5	Benzo(a)pyrene	0.2
Chromium	0.1	1,2,4-Trichlorobenzene	70	Carbofuran	40
Cyanide (free)	0.2	Benzene	5	Chlordane	2
Fluoride (Adjusted) *	2	Carbon Tetrachloride	5	Dalapon	200
Fluoride (Natural) *	4	Cis-1,2-Dichloroethylene	70	Di(2-ethylhexyl)adipate	400
Mercury	0.002	Dichloromethane	5	Di(2-ethylhexyl)phthalate	6
Nickel	---	Ethylbenzene	700	Dibromochloropropane (DBCP)	0.2
Selenium	0.05	Monochlorobenzene	100	Dinoseb	7
Thallium	0.002	o-Dichlorobenzene	600	Dioxin (2,3,7,8-TCDD)	3X10-5
Nitrate	10	p-Dichlorobenzene	75	Diquat	20
Nitrite	1	Styrene	100	Endothall	100
Total Nitrate & Nitrite	10	Tetrachloroethylene	5	Endrin	2
		Toluene	1000	Ethylene Dibromide (EDB)	0.05
Sodium *	No MCL	Trans-1,2-Dichloroethylene	100	Glyphosate	700
		Trichloroethylene	5	Heptachlor	0.4
Asbestos		Vinyl Chloride	2	Heptachlor epoxide	0.2
Asbestos	7 MFL**	Xylenes (total)	10,000	Hexachlorobenzene	1
				Hexachlorocyclopentadiene	50
				Lindane	0.2
				Methoxychlor	40
Lead & Copper		**Disinfection Byproducts**		Oxamyl (Vydate)	200
Lead Action Level	0.015	Total Trihalomethanes ****	80	PCBs	0.5
Copper Action Level	1.3	Haloacetic Acids 5*****	60	Pentachlorophenol	1
				Picloram	500
Radionuclides *	**PCi/l**			Simazine	4
Gross Alpha	15			Toxaphene	3
Gross Alpha Action Level	5				
Radium-226 Action Level	3				
Radium-226 & Radium-228 (combined)	5				
Manmade	***				

* Community Water Systems Only
** MFL=million fibers/liter > 10 micron
*** The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem per year.
**** The sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform), and trichloromethane (chloroform).
*****The sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid.

Code Type	-	Description
01	-	MCL, Single Sample
02	-	MCL, Average
03	-	Monitoring, Regular
21	-	MCL, Acute (TCR)
22	-	MCL, Monthly (TCR)
23	-	Monitoring, Routine Major (TCR)
24	-	Monitoring, Routine Minor (TCR)
25	-	Monitoring, Repeat Major (TCR)
26	-	Monitoring, Repeat Minor (TCR)
51	-	Initial Tap Sampling (Lead and Copper)
52	-	Follow Up or Routine Tap (Lead and Copper)
41	-	Treatment Techniques (Surface Water)
65	-	Public Education
71	-	Consumer Confidence Report
C	-	Community Water System
NTNC	-	Non-Transient Non-Community Water System
NC	-	Transient Water System
GW	-	Ground Water System
GWP	-	Ground Water Purchased System
SW	-	Surface Water System
SWP	-	Surface Water Purchased System